

Utah Department of Transportation Traffic Management Division

May 2015

Monthly Report



2060 South 2760 West Salt Lake City, Utah 84104 801-887-3710 www.udottraffic.utah.gov



Mission of the Traffic Management Division

- To Support UDOT and the Department of Public Safety to Achieve Zero Fatalities.
- To Help Provide Reliable and Efficient Travel Throughout Utah.
- To Provide Useful and Timely Real-time Traffic Information.
- To Work Together with Other Government Agencies to Serve the Public.
- To Provide Excellent Customer Service.

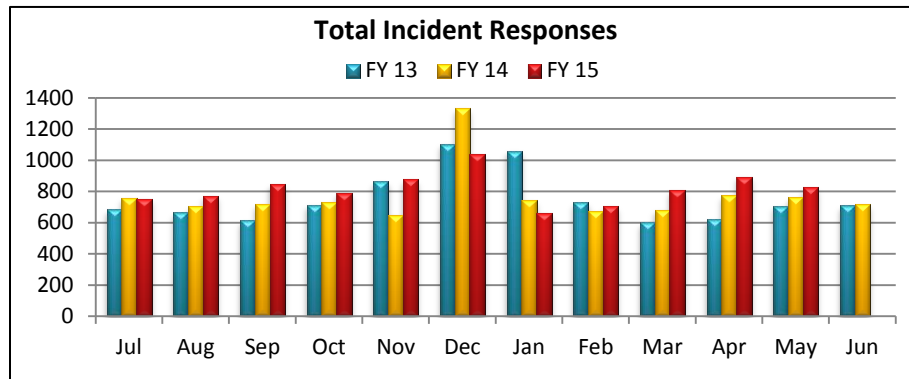
Field Devices Summary

Freeway PTZ Cameras	369	Freeway VMS	96
Arterial PTZ Cameras	426	Surface Street VMS	49
RWIS & Contracted Weather Cameras	200	Portable TOC VMS	5
Viewable Detection Cameras	67	Legacy Trucks Prohibited VMS	21
Total Cameras	1062	Variable Speed Limit VMS	15
HAR (27 permanent/5 portable)	32	Chain-Up Signs	8
RWIS	98	Total VMS	194
Ramp Meters	63	TMS	533
Express Lane Plazas	63	Traffic Signals	1604

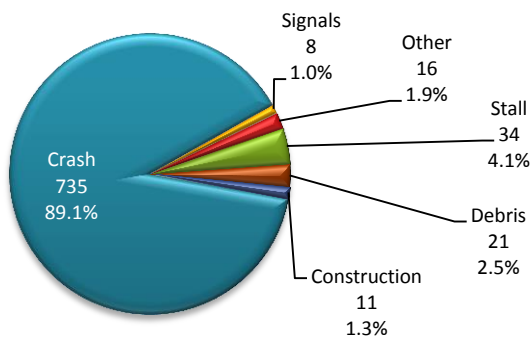
Operations Summary

VMS Messages Displayed	46,821	IMT Assists	2014
Signal Timing Work Orders	41	Website Visitor Sessions	127,220
Signal Maintenance Work Orders	125	511 Calls	12,239
All New Work Orders	457	Weather Desk Calls	294
Incident Responses by the TOC	825	Ask CommuterLink Questions	25
Incident Duration Average Minutes	60	UDOT Traffic Followers and Re-tweets	300,659

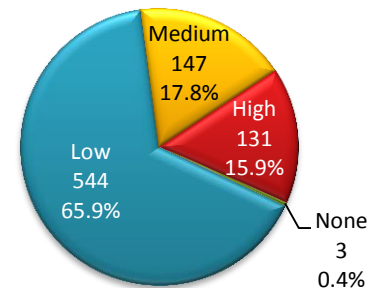
An incident response occurs each time an incident is recorded in the ATMS system. These can be of several types, including crash, construction, debris, stall, congestion, or other. Crashes are separated into three subcategories: property damage, personal injury, and fatal. Each time an incident is created, information is sent to the 511 system, the website, and to the public through email alerts. An incident remains active until it has been completely cleared from the roadway.



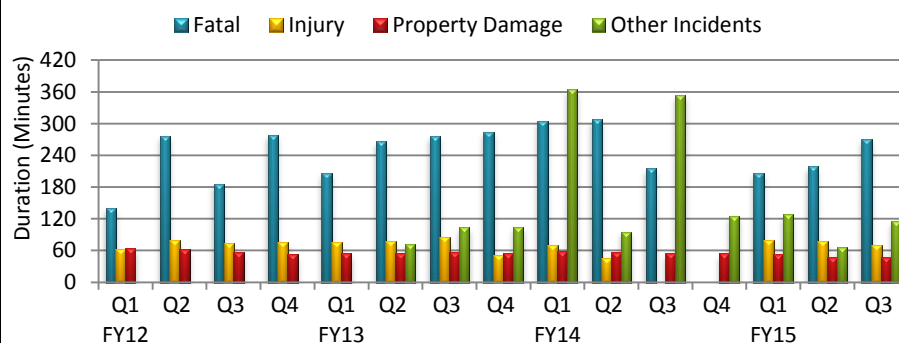
Incidents By Type for May 2015



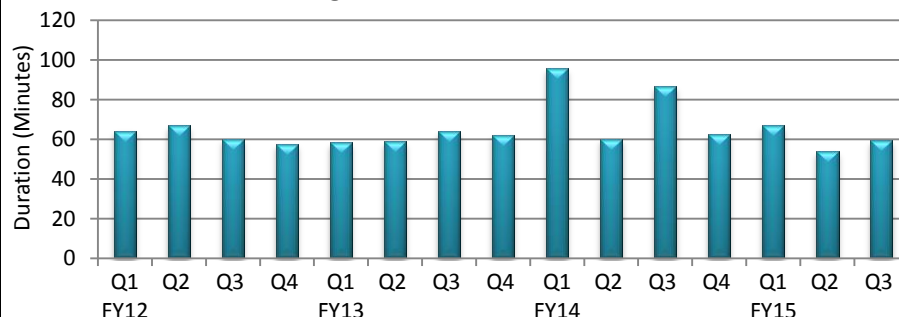
Incidents by Severity for May 2015



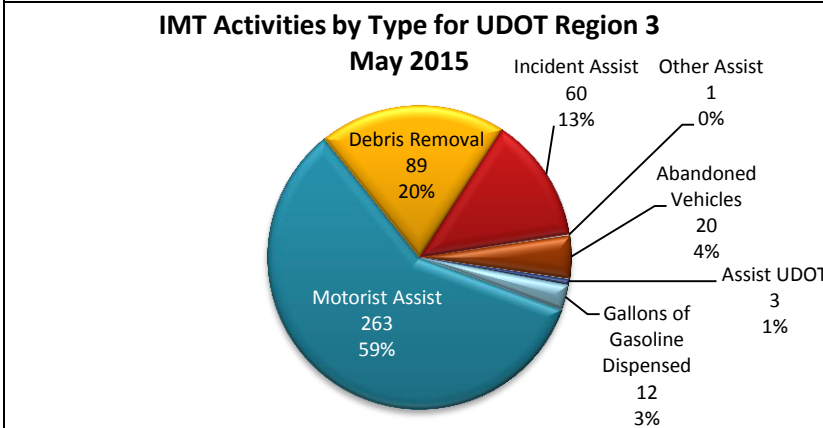
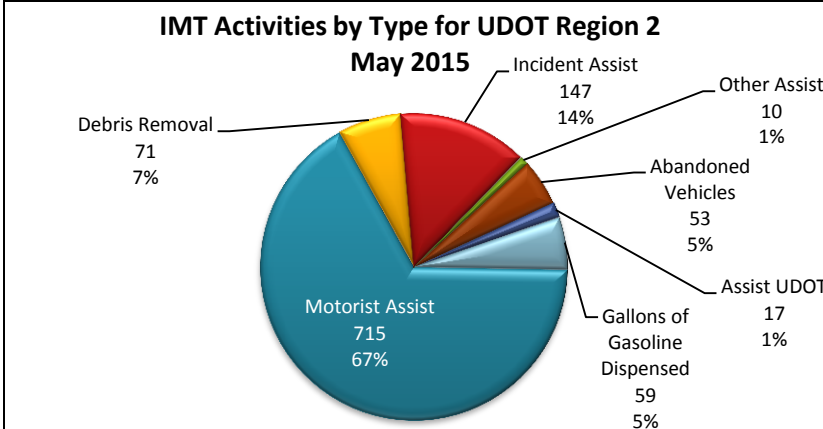
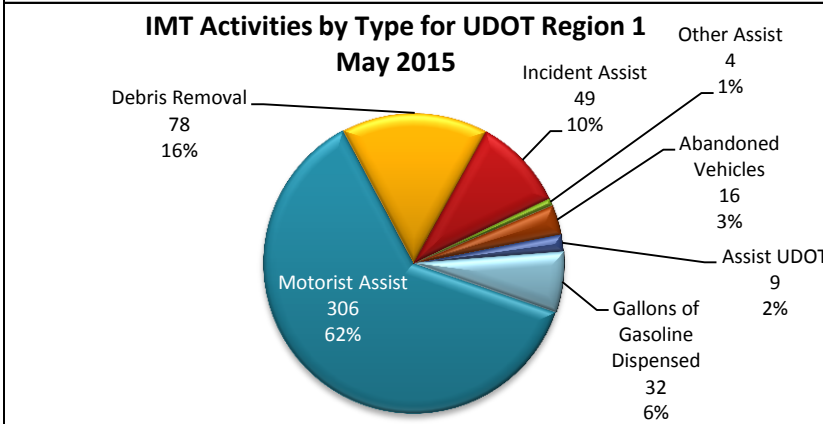
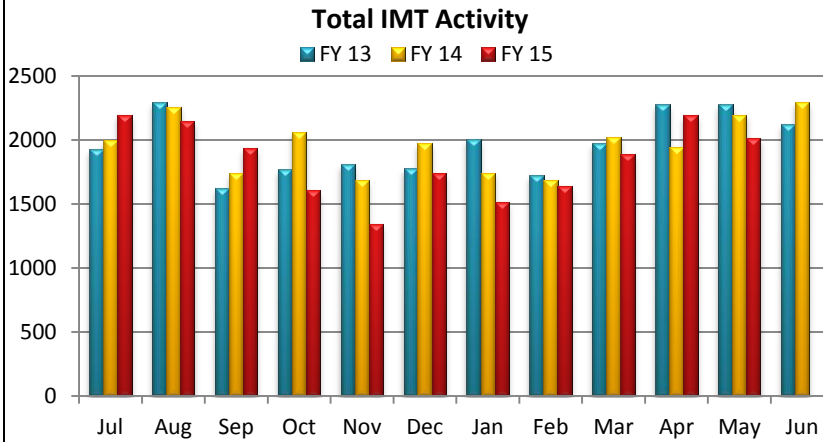
Average Crash Duration



Average Duration of All Incidents



Incident Management Team (IMT) Activities



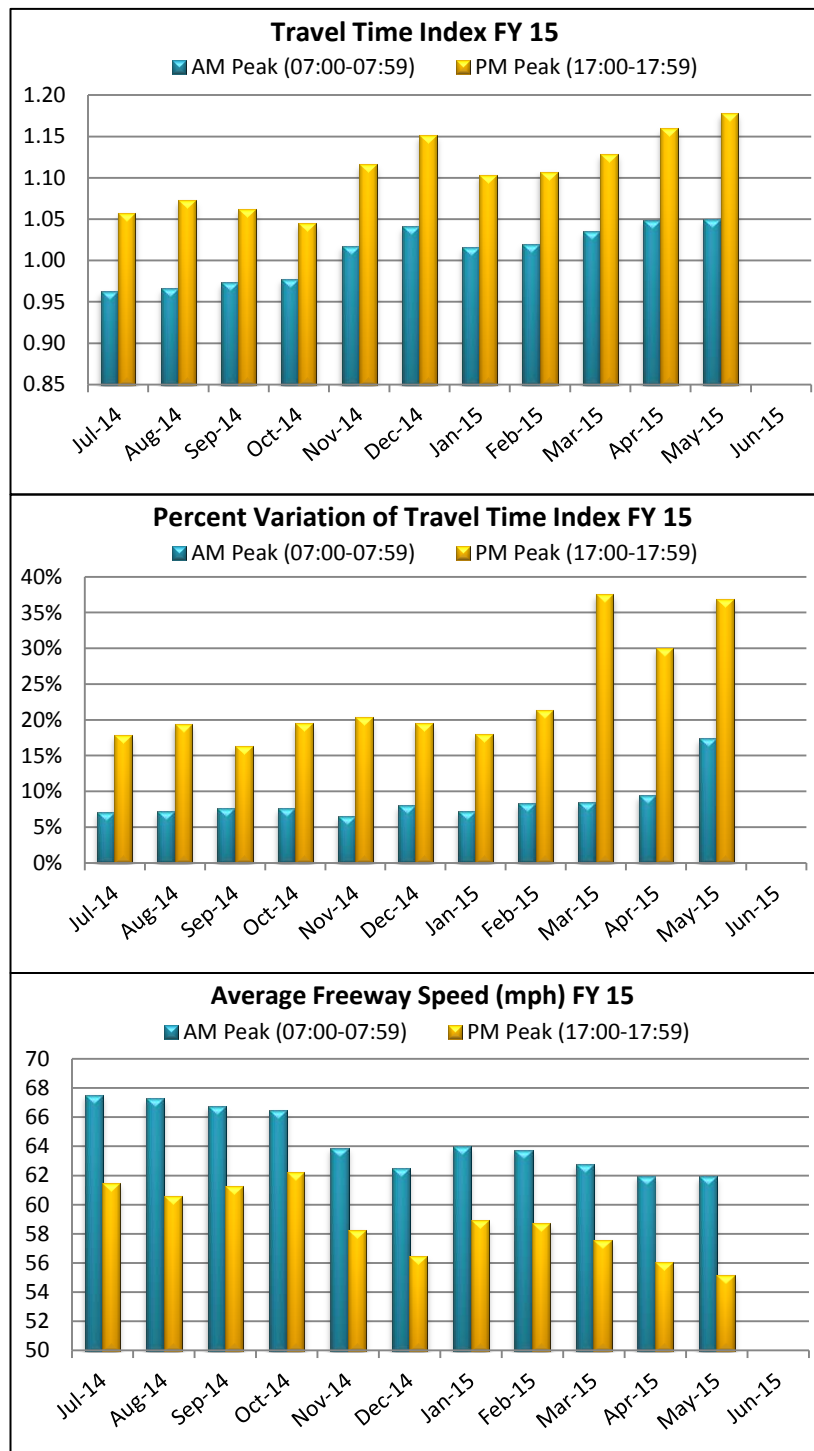
Freeway Traffic Level of Service

Freeway flow measures are taken from the Traffic Monitoring Stations (TMS) located throughout the Wasatch Front. As more TMS sites are installed throughout the state, they will be included in these performance measures.

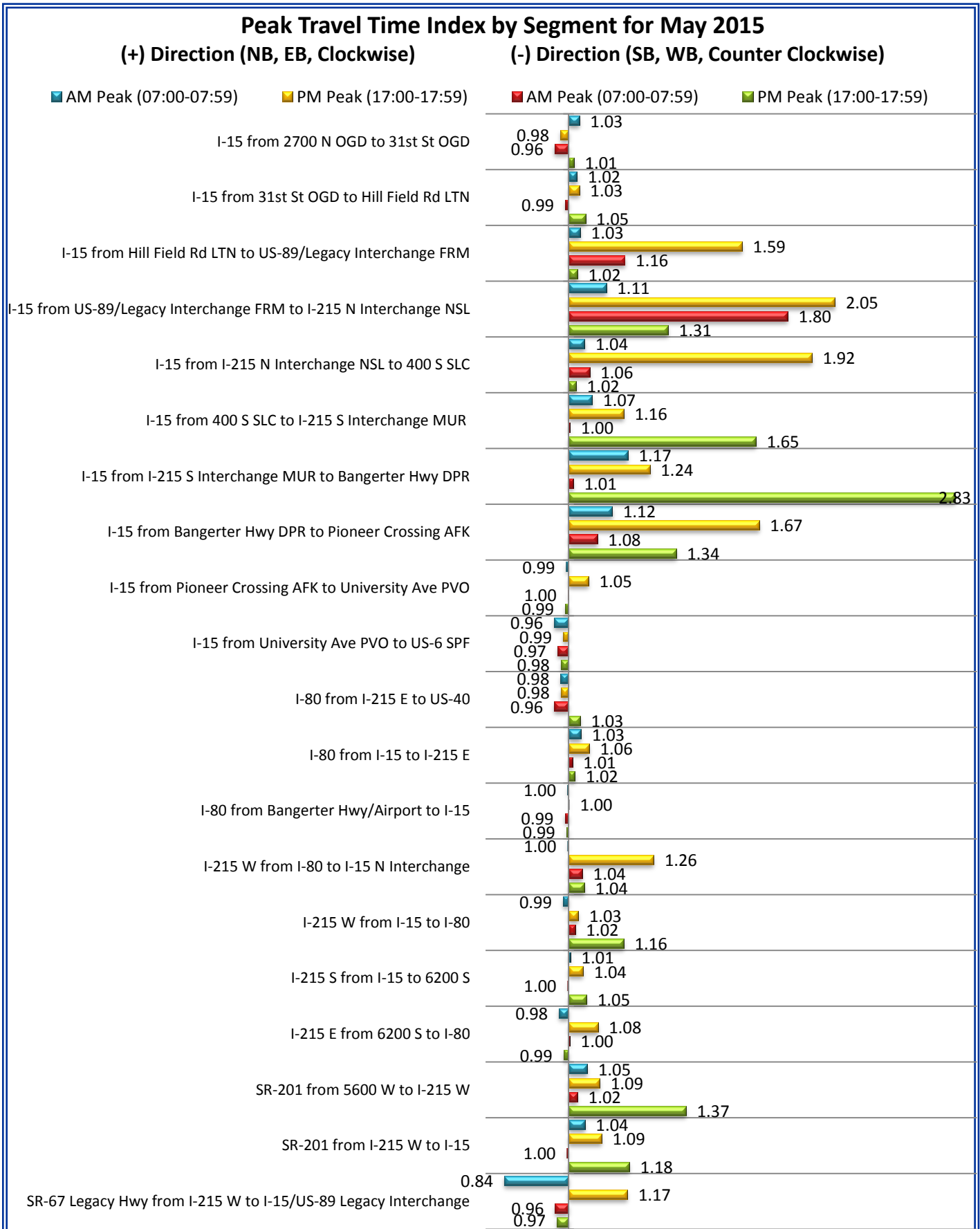
Travel Time Index: This measure of mobility is based on freeway speeds and is weighted by segment lengths and by the traffic volume. A value of 1.0 represents free-flow speeds. A value of 1.12 indicates that the average vehicle trip takes 12% longer than if that were the only vehicle on the freeway.

Percent Variation of Travel Time Index: The percent variation in the Travel Time Index is a measure of how much the Travel Time Index changes from day-to-day.

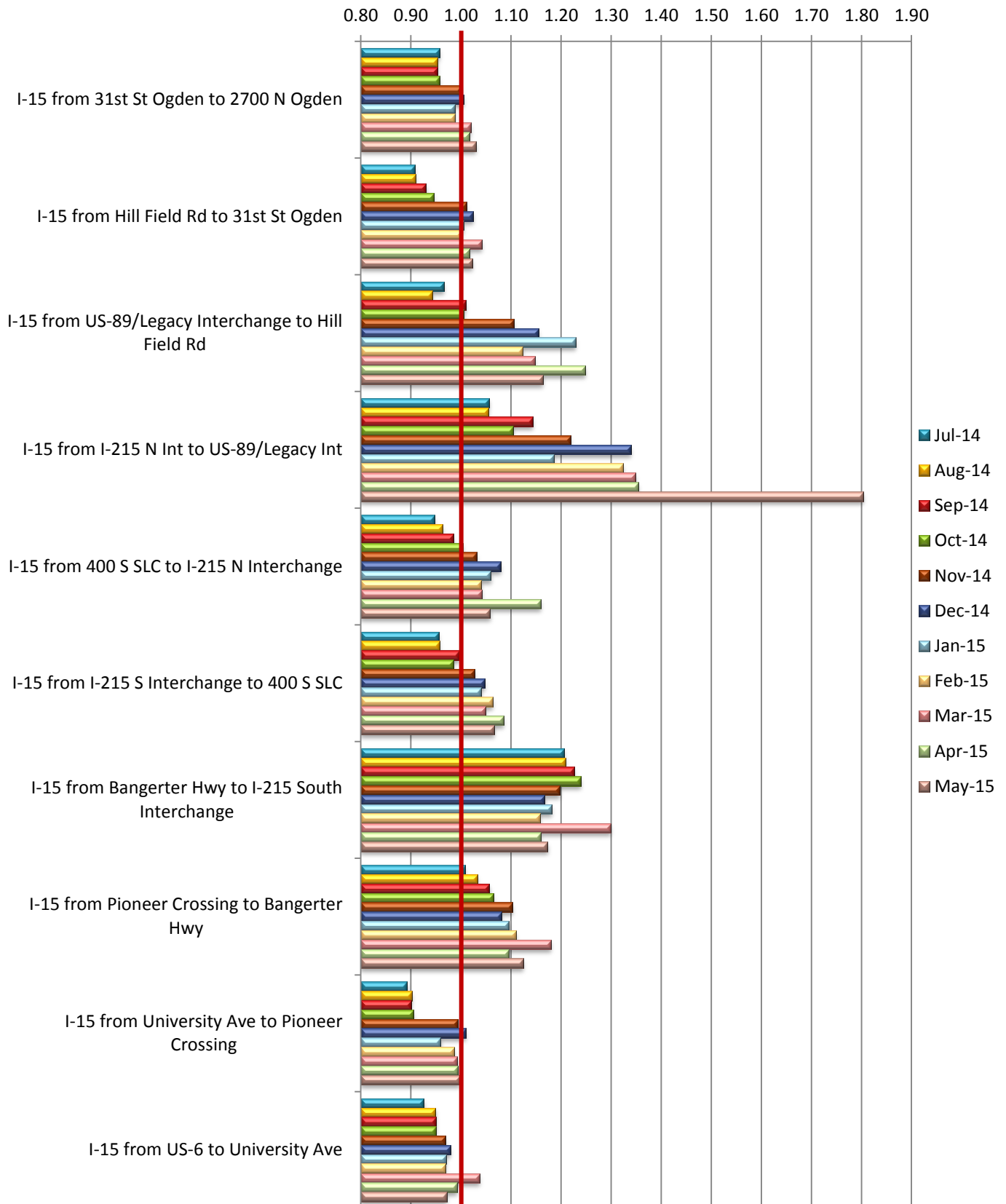
Average Freeway Speed: The freeway speed is weighted by volume.



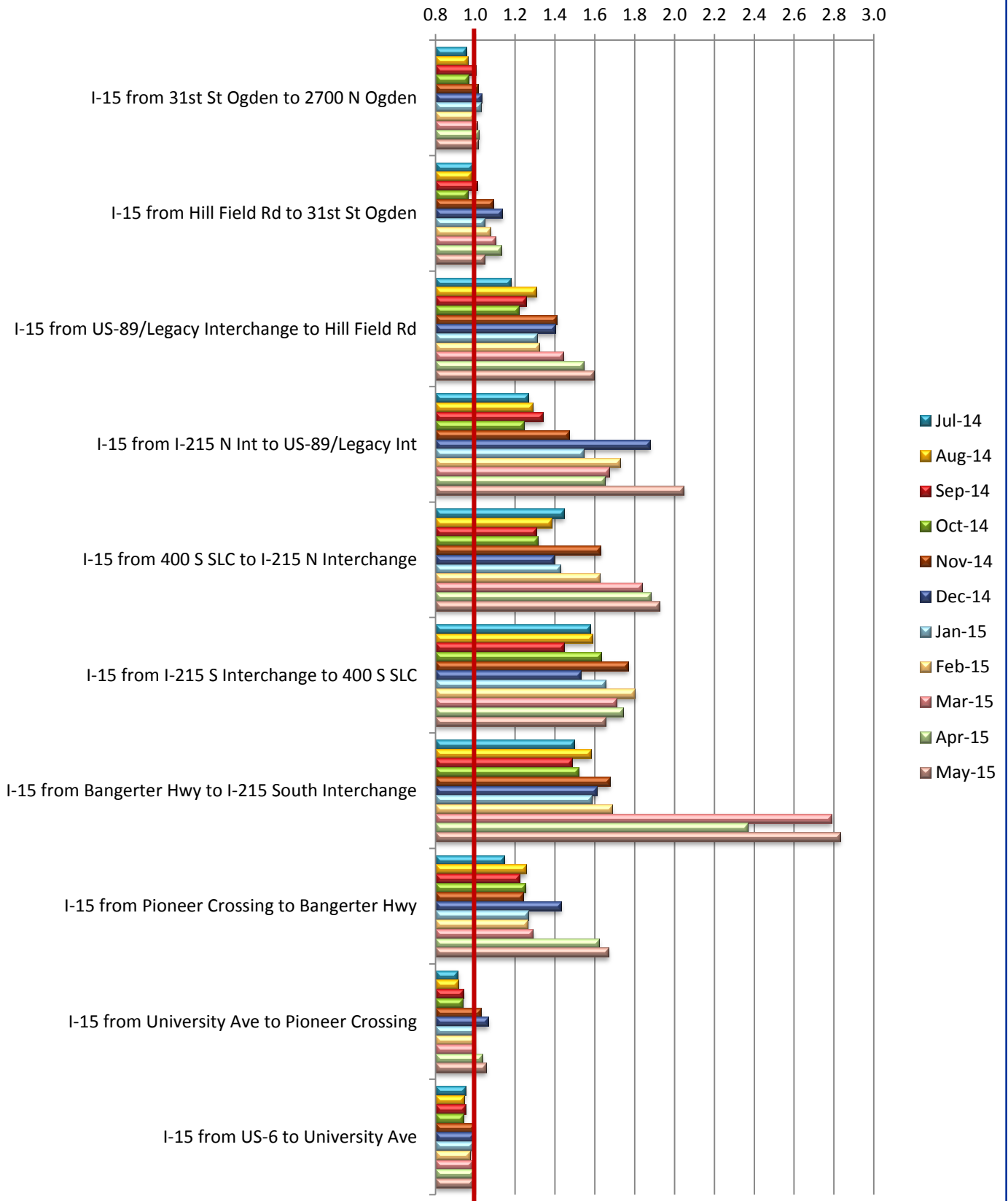
Freeway Traffic Level of Service



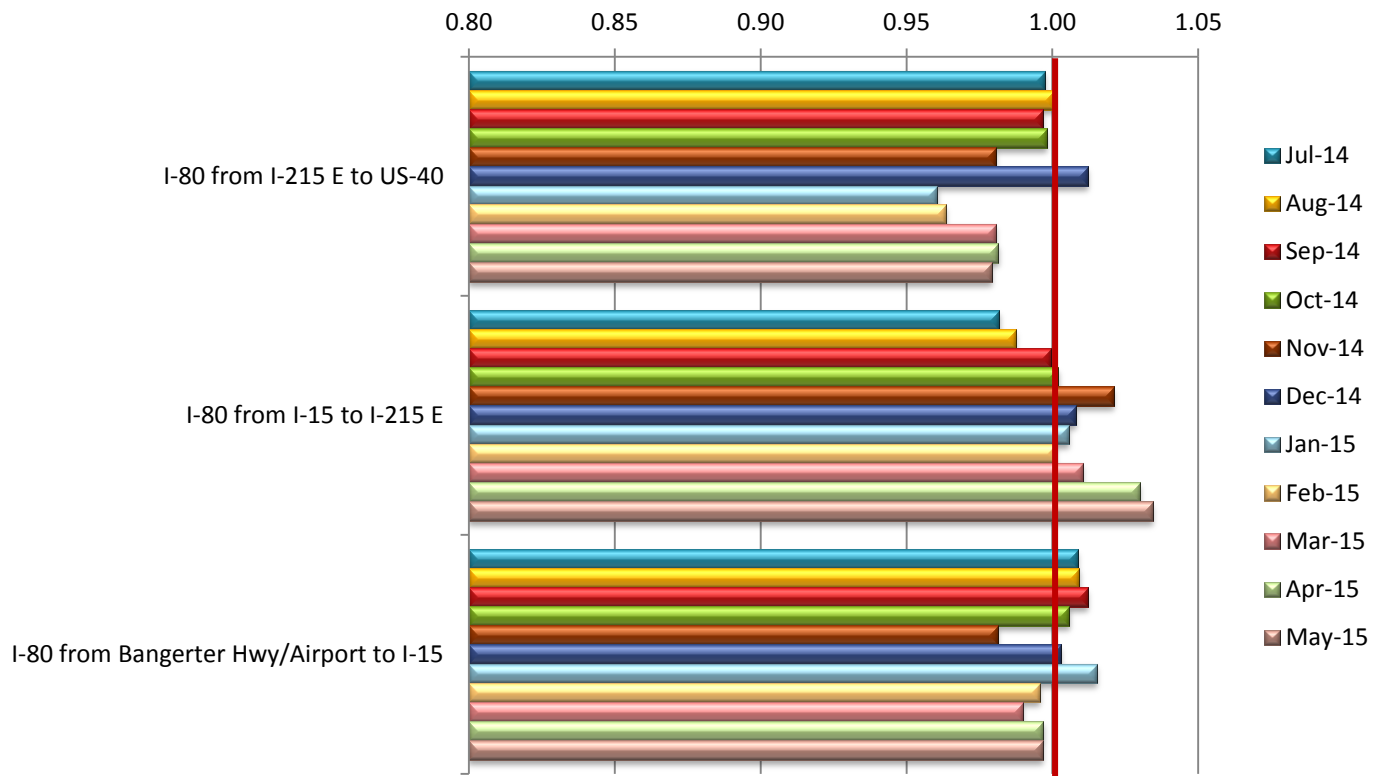
AM Peak Travel Time Index for I-15 FY 15



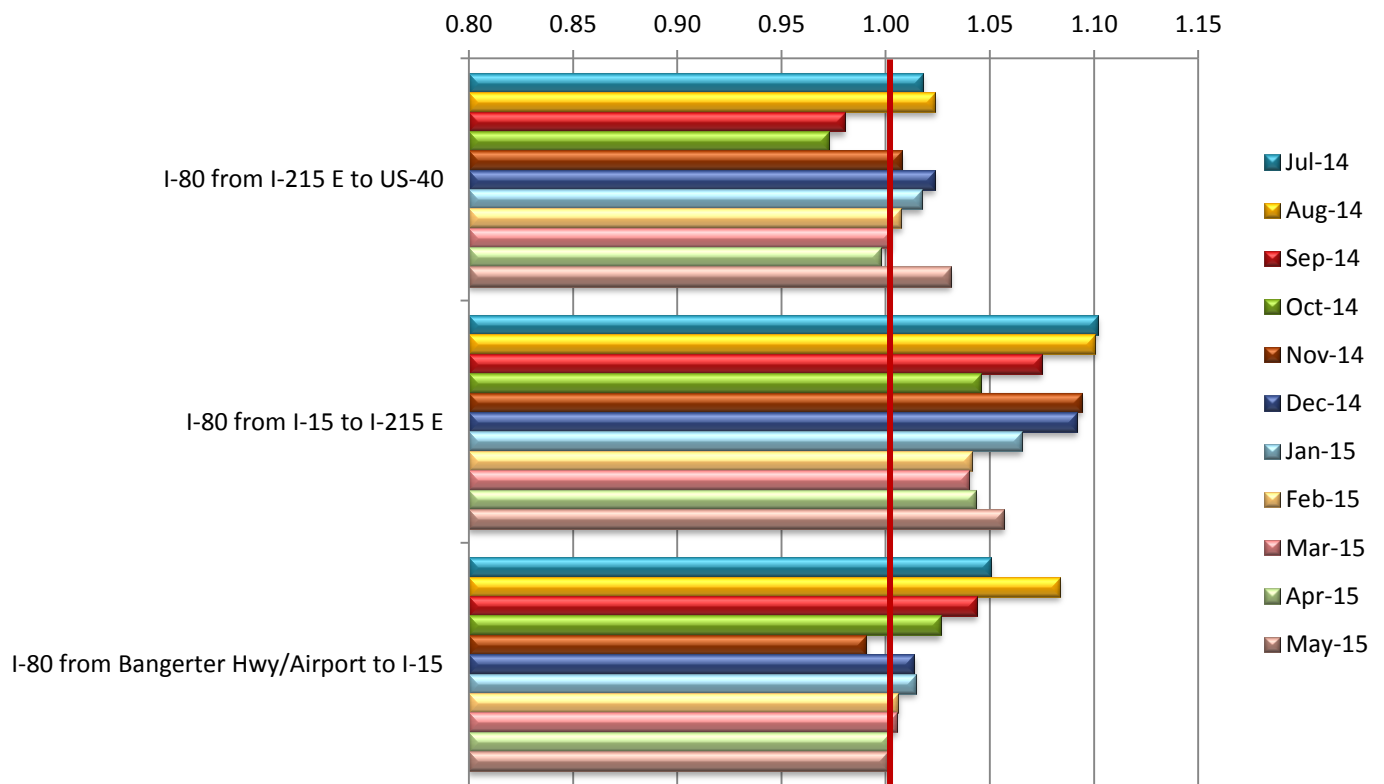
PM Peak Travel Time Index for I-15 FY 15



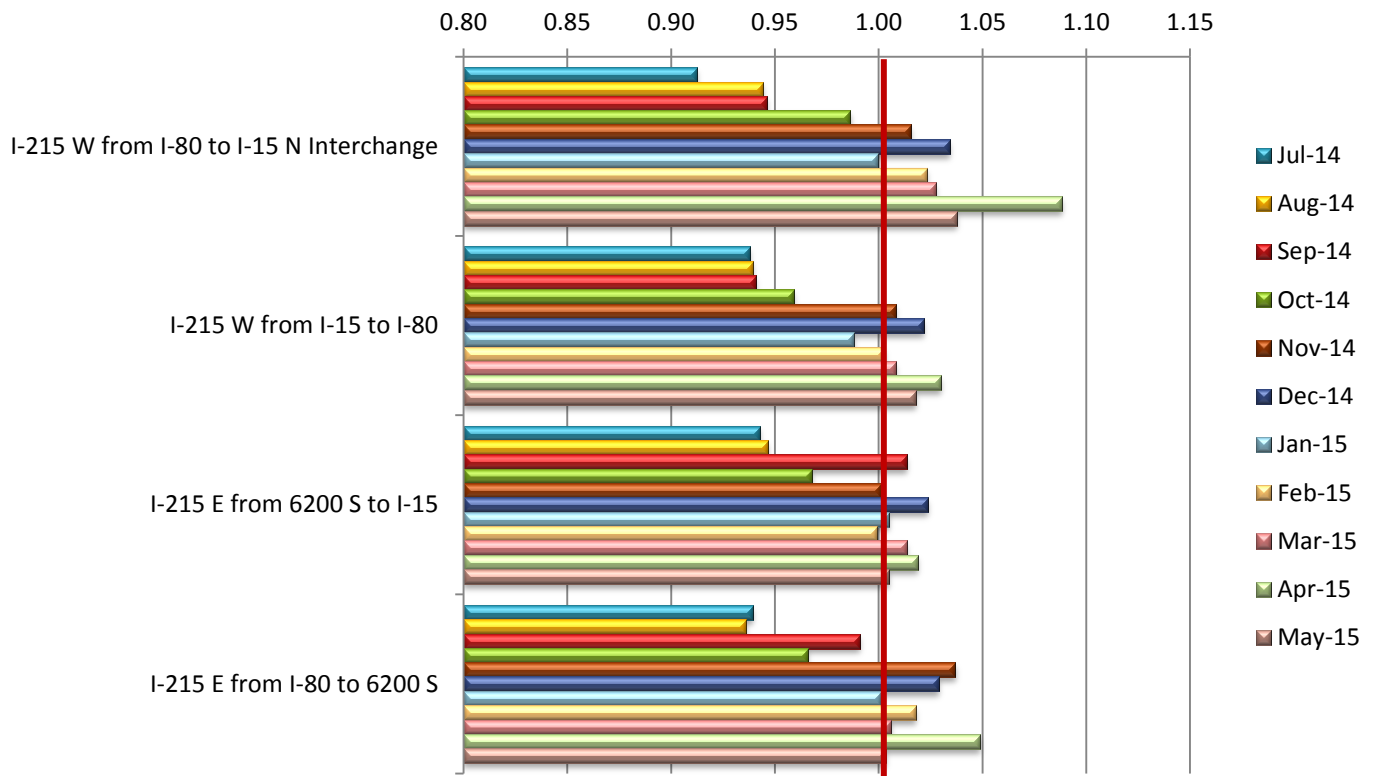
AM Peak Travel Time Index for I-80 FY 15



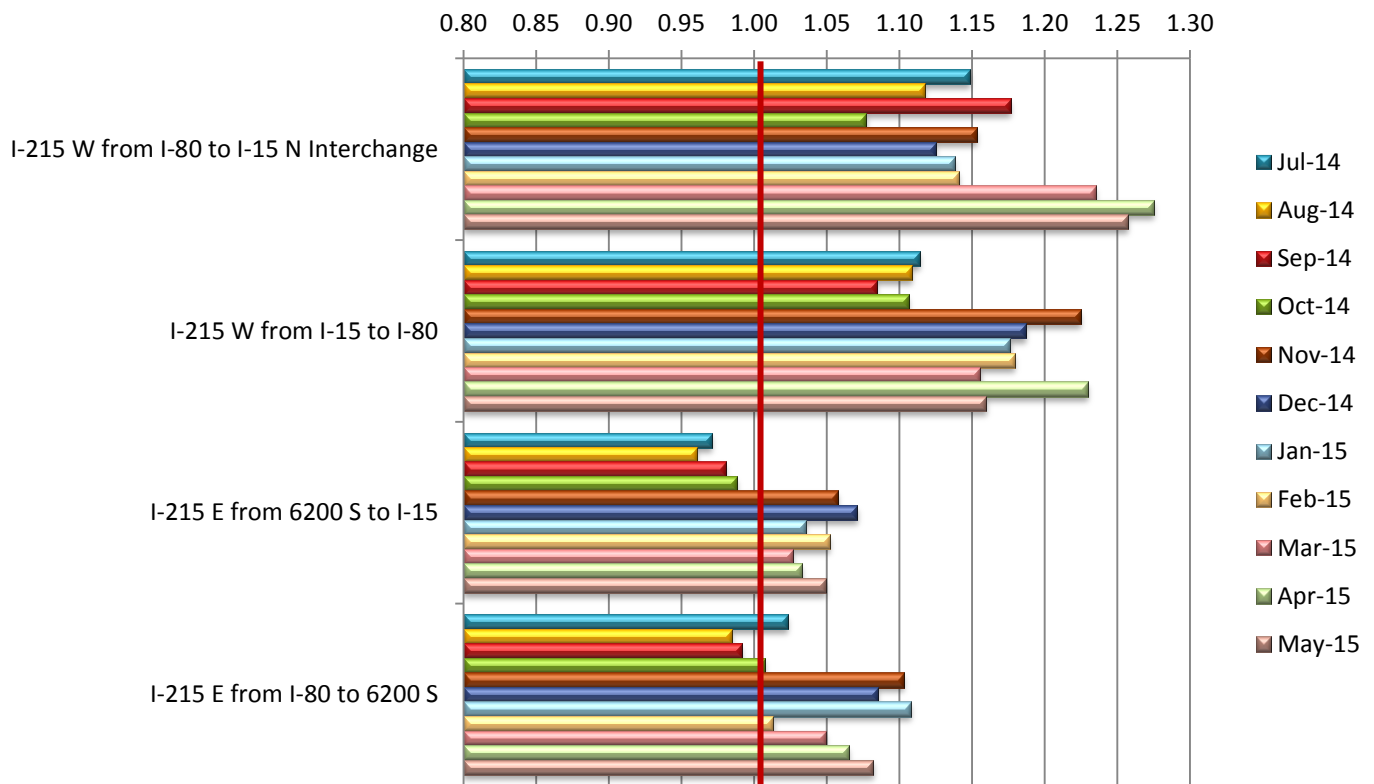
PM Peak Travel Time Index for I-80 FY 15



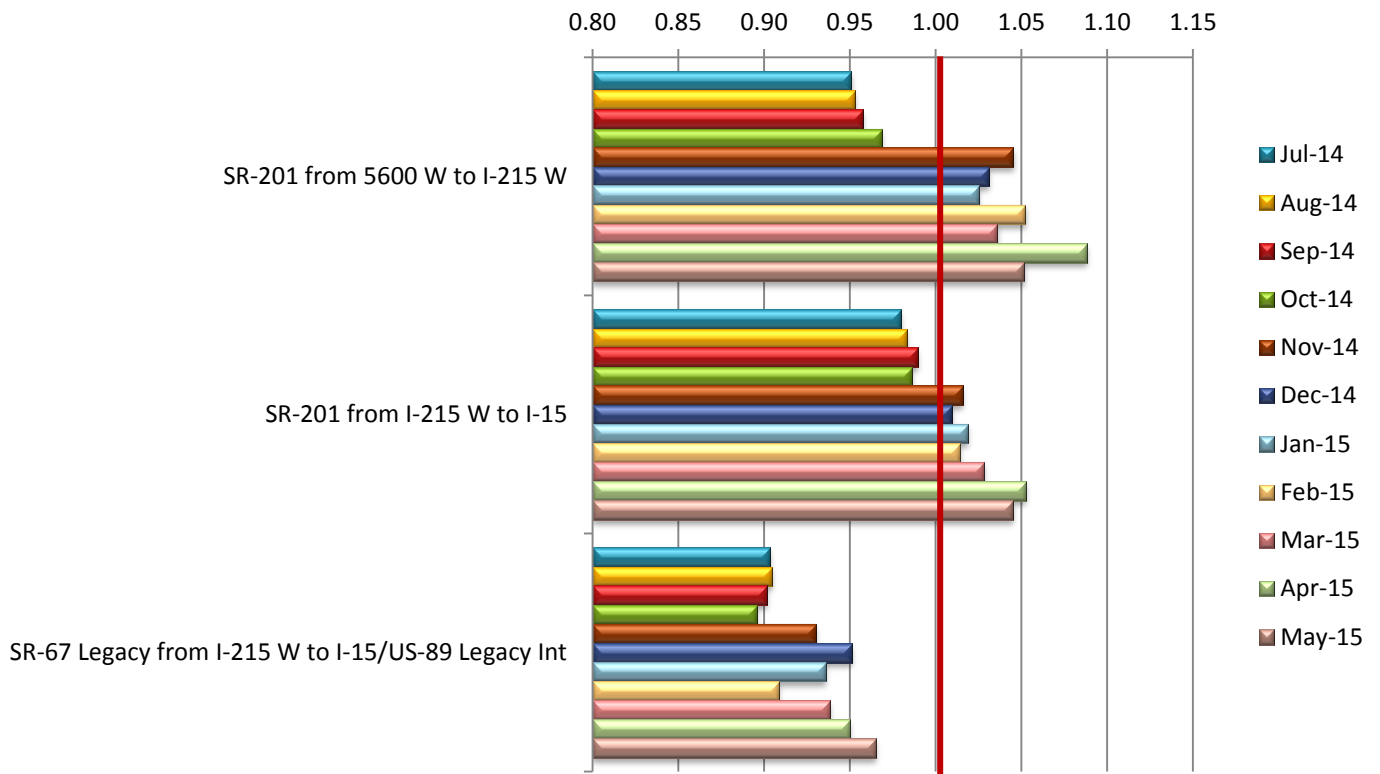
AM Peak Travel Time Index for I-215 FY 15



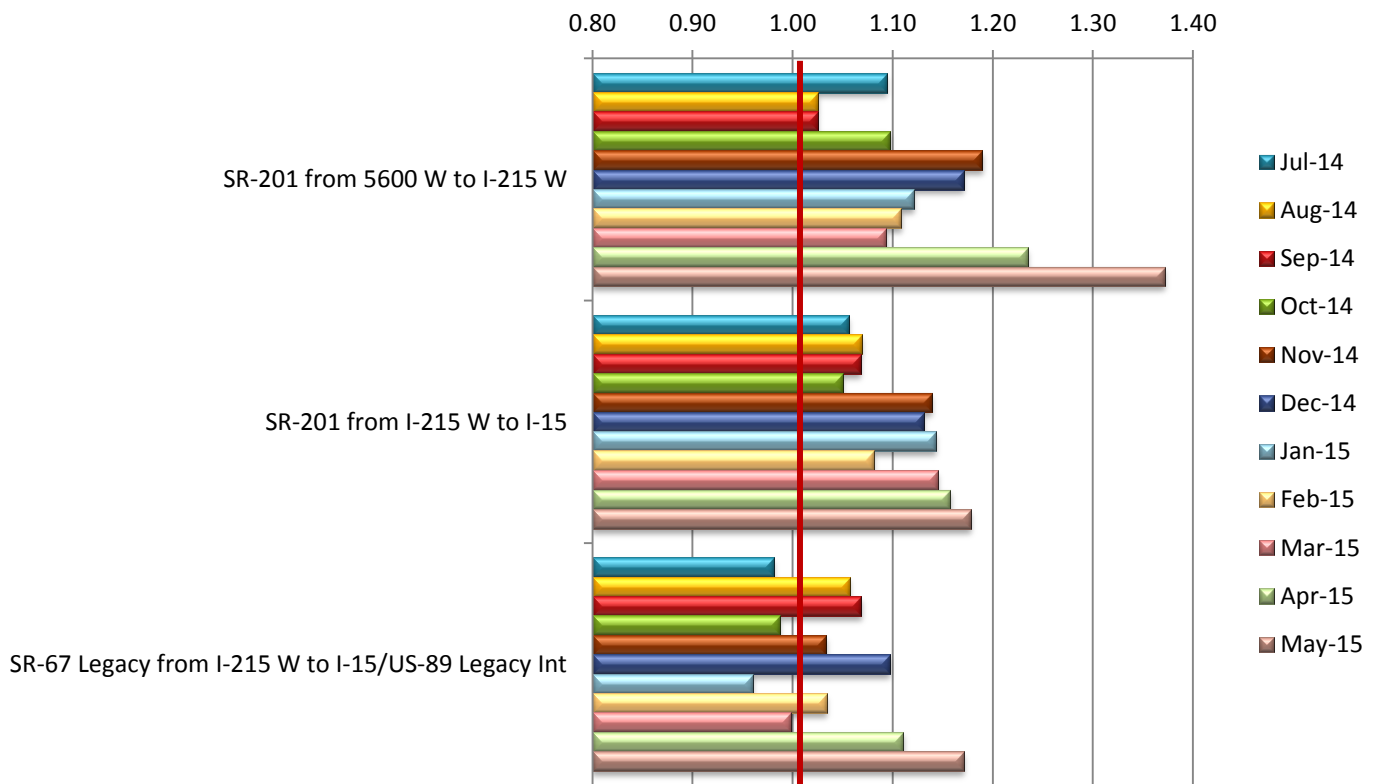
PM Peak Travel Time Index for I-215 FY 15



AM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 15

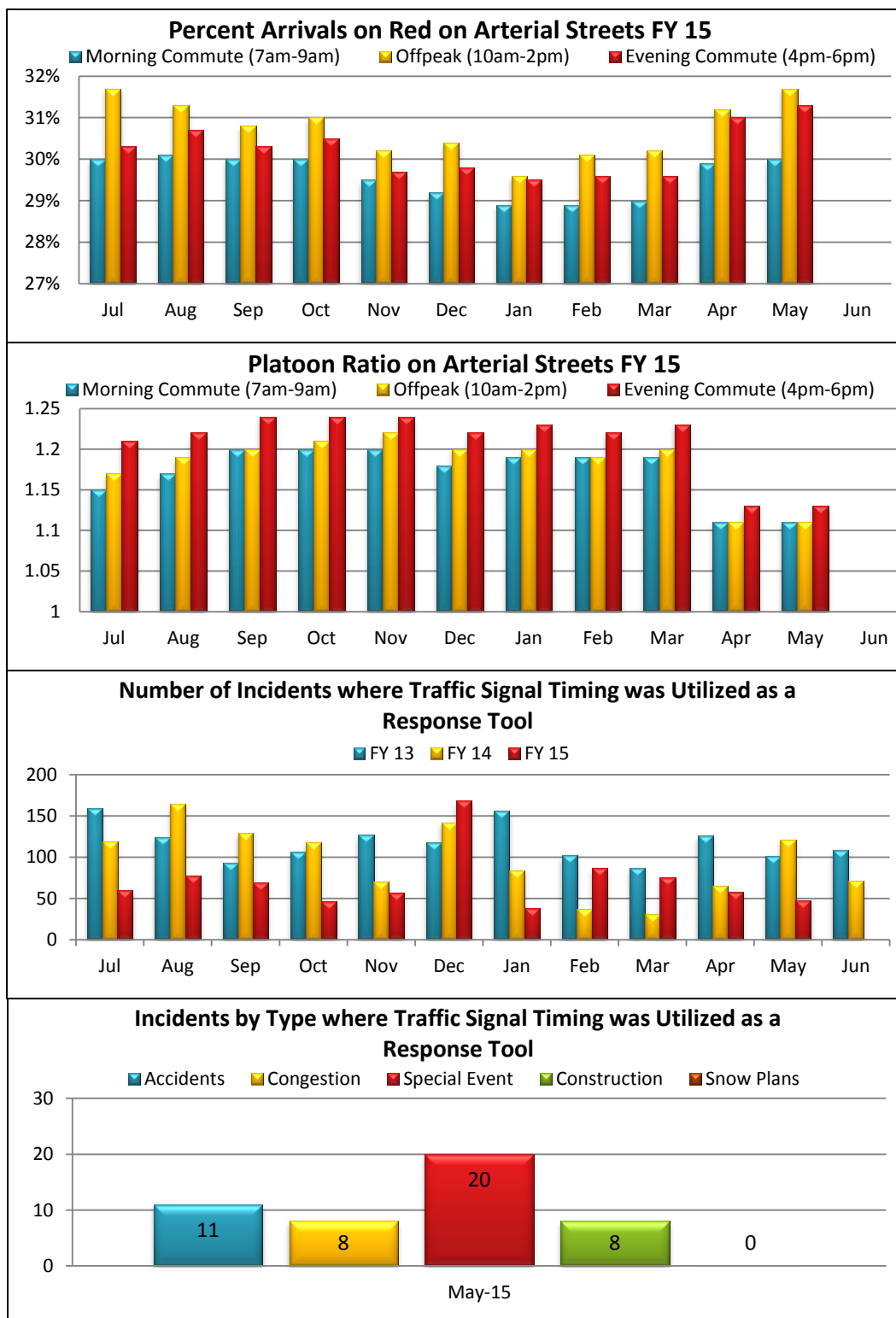


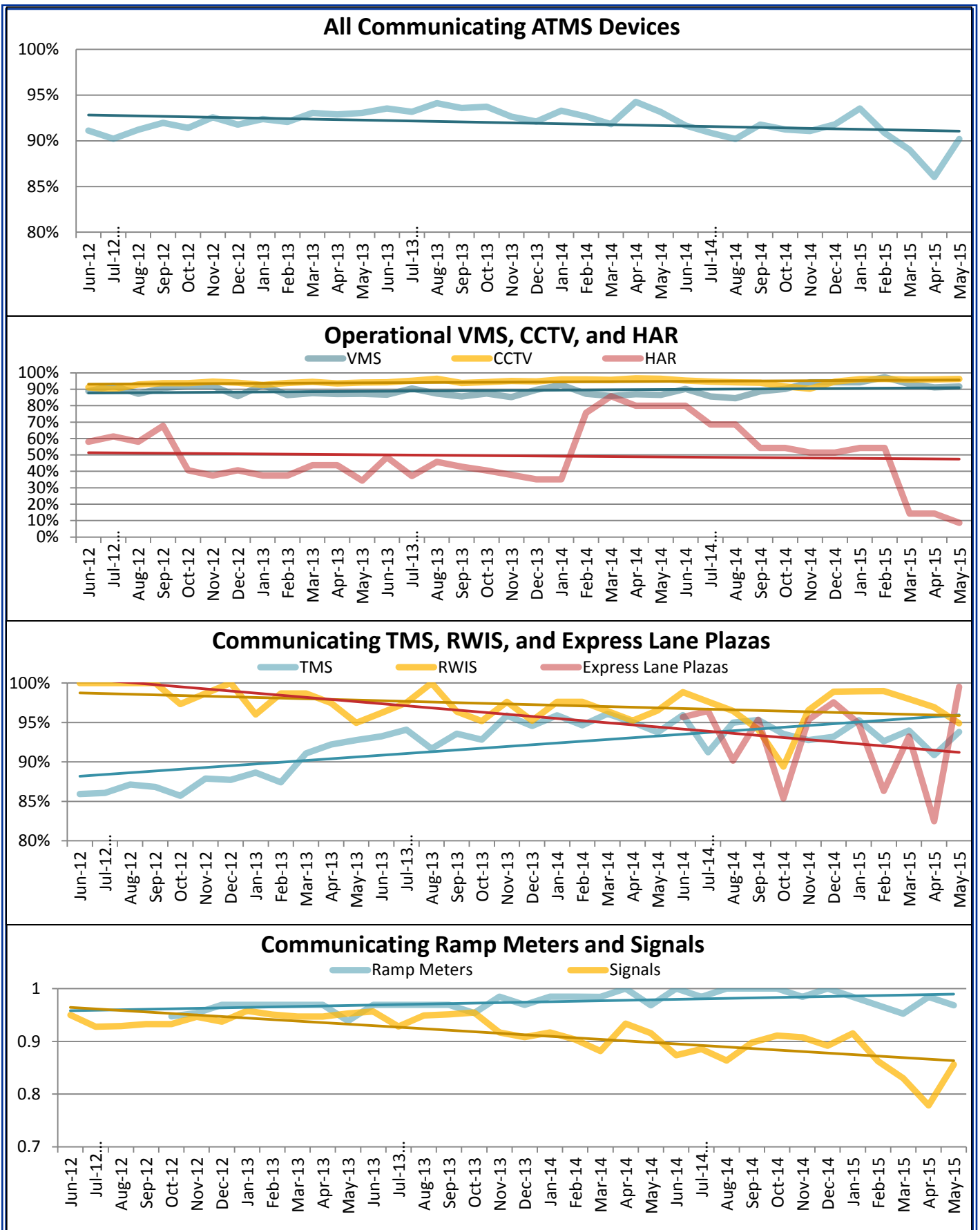
PM Peak Travel Time Index for SR-201 and SR-67 Legacy Hwy FY 15



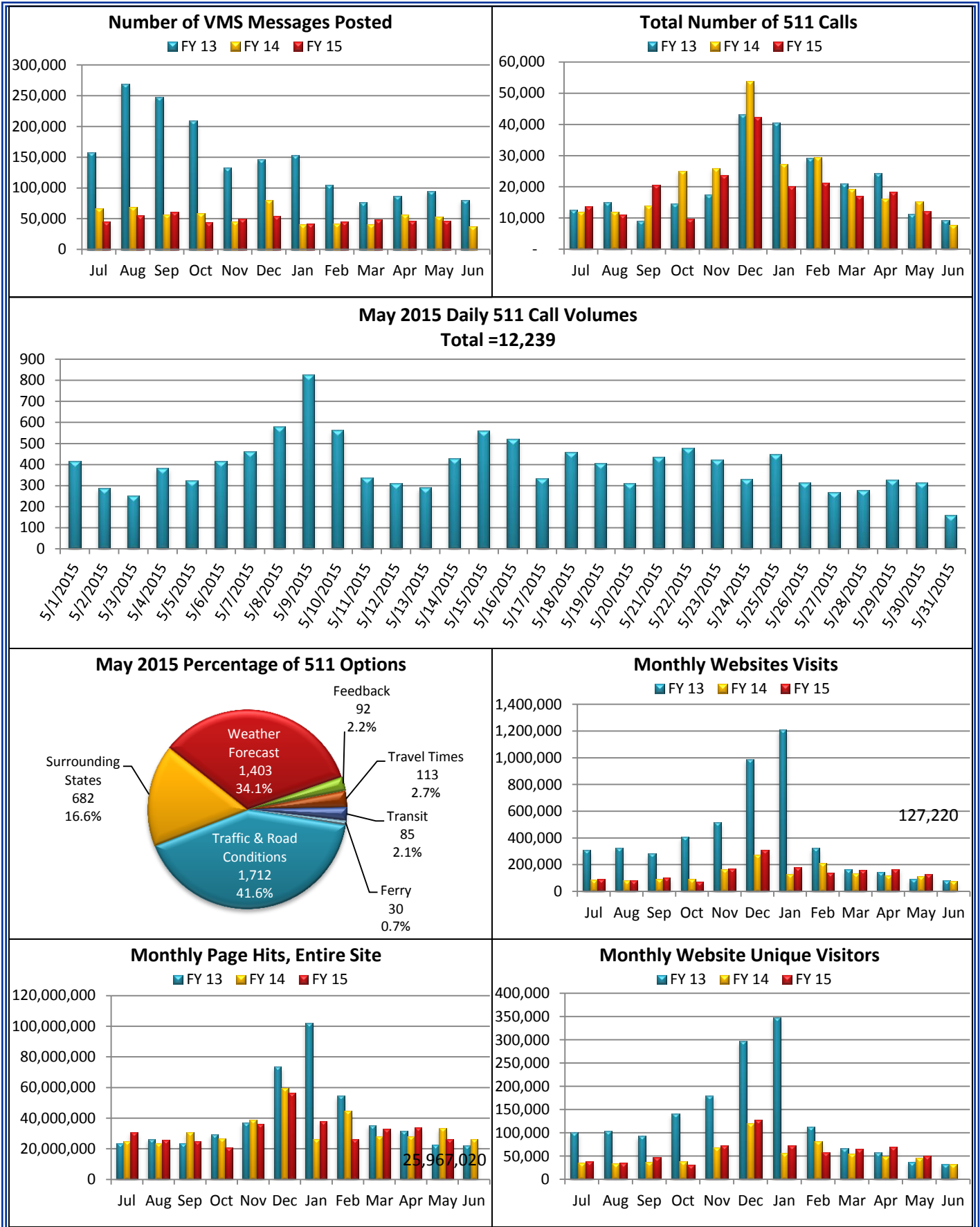
Arterial Traffic Level of Service

The percent arrival on red along the arterial statistics are generated automatically through the automated traffic signal performance measures, which show real-time and historical functionality at signalized intersections. The system automatically time-stamps when each vehicle arrives at the intersection and then compares the detection time-stamp if the phase was green or red. The percent arrival on red data is averaged over the 24 hours of the day and days in the month. . The lower charts shows the number of incidents where traffic signal timing was modified in order to help traffic flow around closed lanes, or to help relieve excessive congestion.

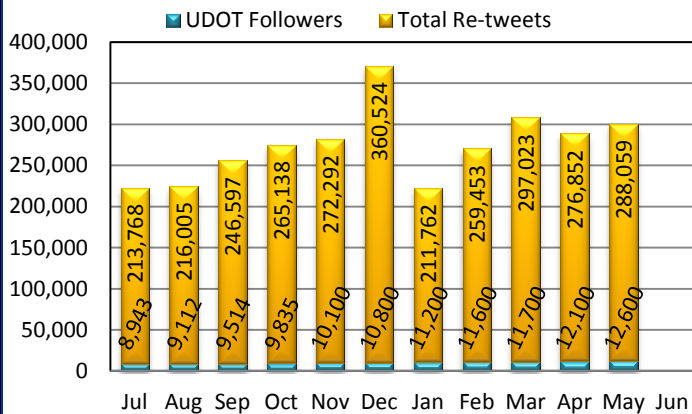




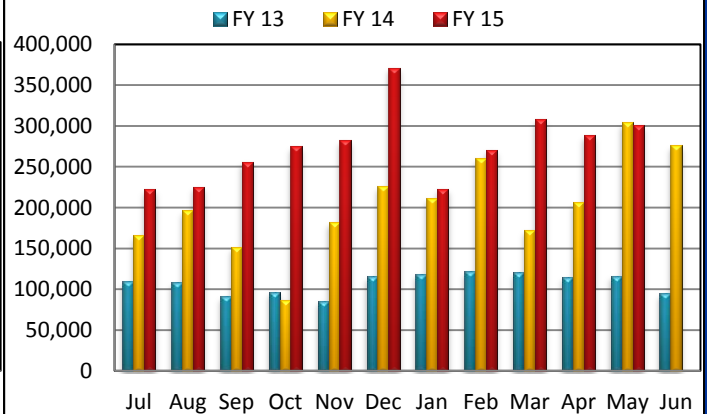
Traveler Information



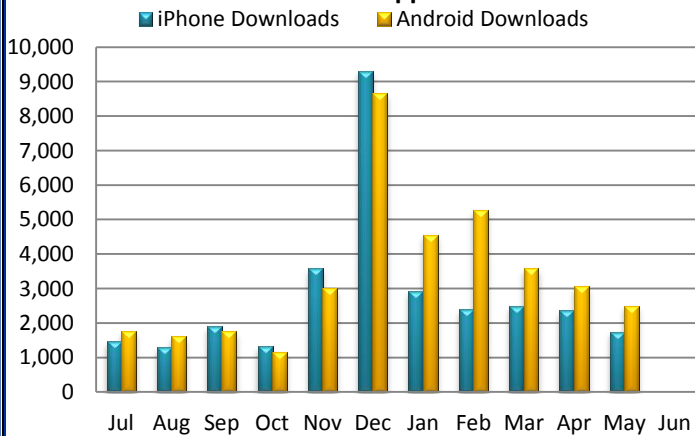
UDOT Traffic Twitter Activity - FY 15



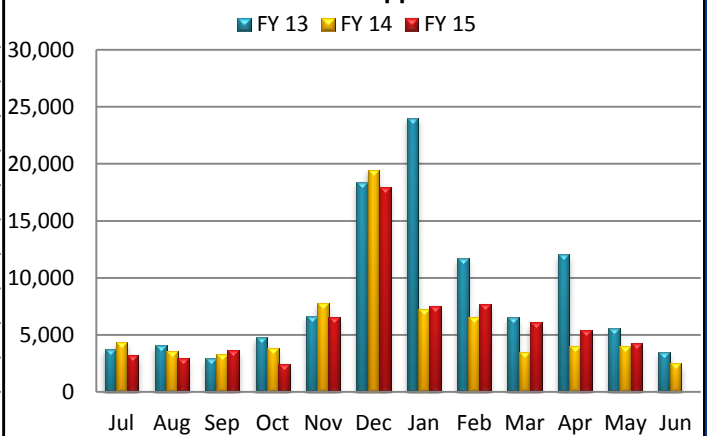
UDOT Traffic Followers and Re-tweets



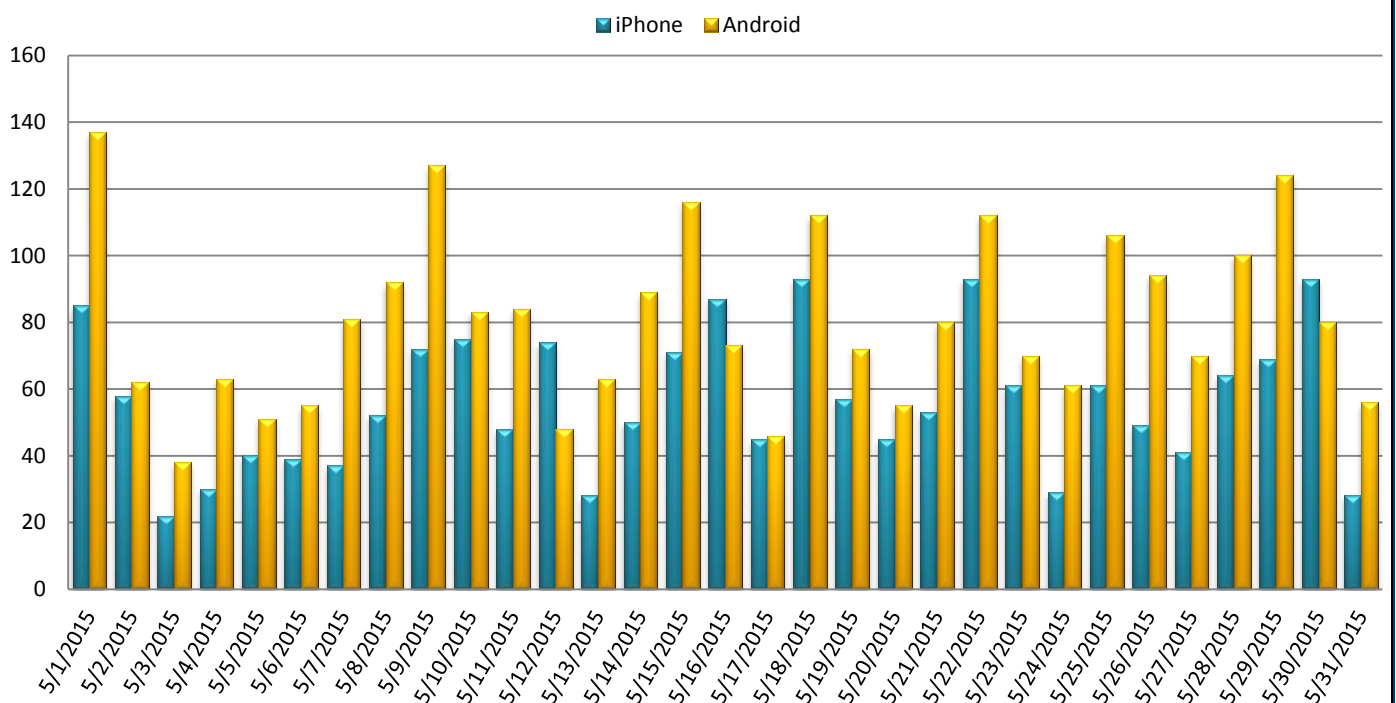
UDOT Traffic App - FY 15



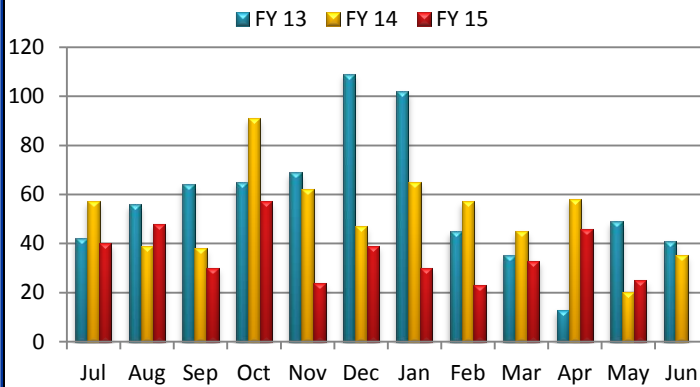
UDOT Traffic App Downloads



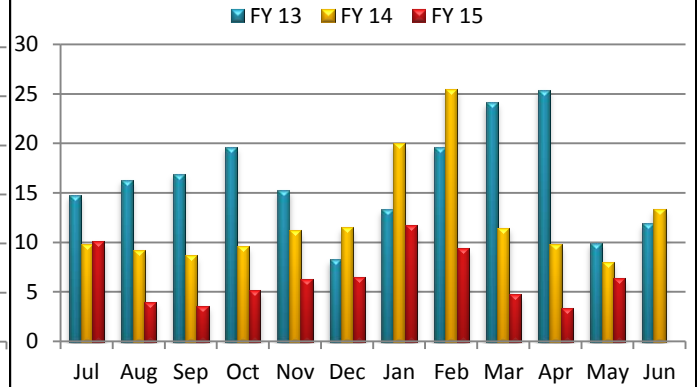
UDOT Traffic App Downloads - May 2015



Number of "Ask UDOT Traffic" Questions

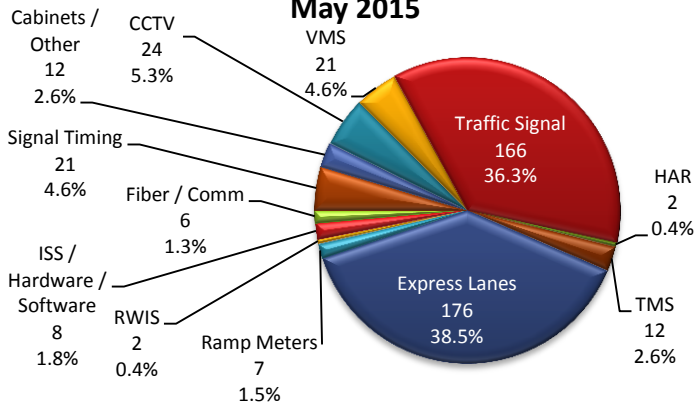


Overall Average Work Order Turnaround Days

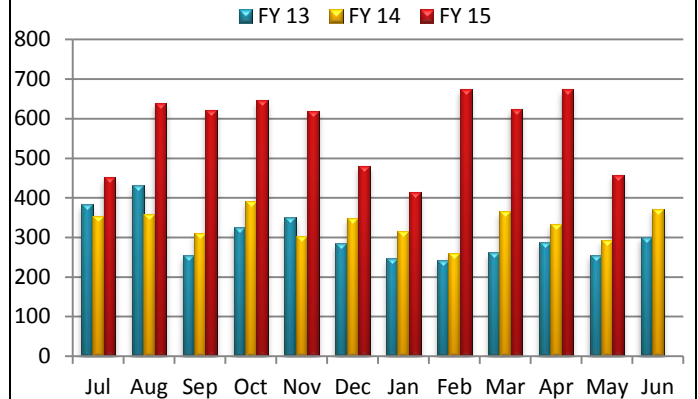


New Work Orders by Device Type

May 2015

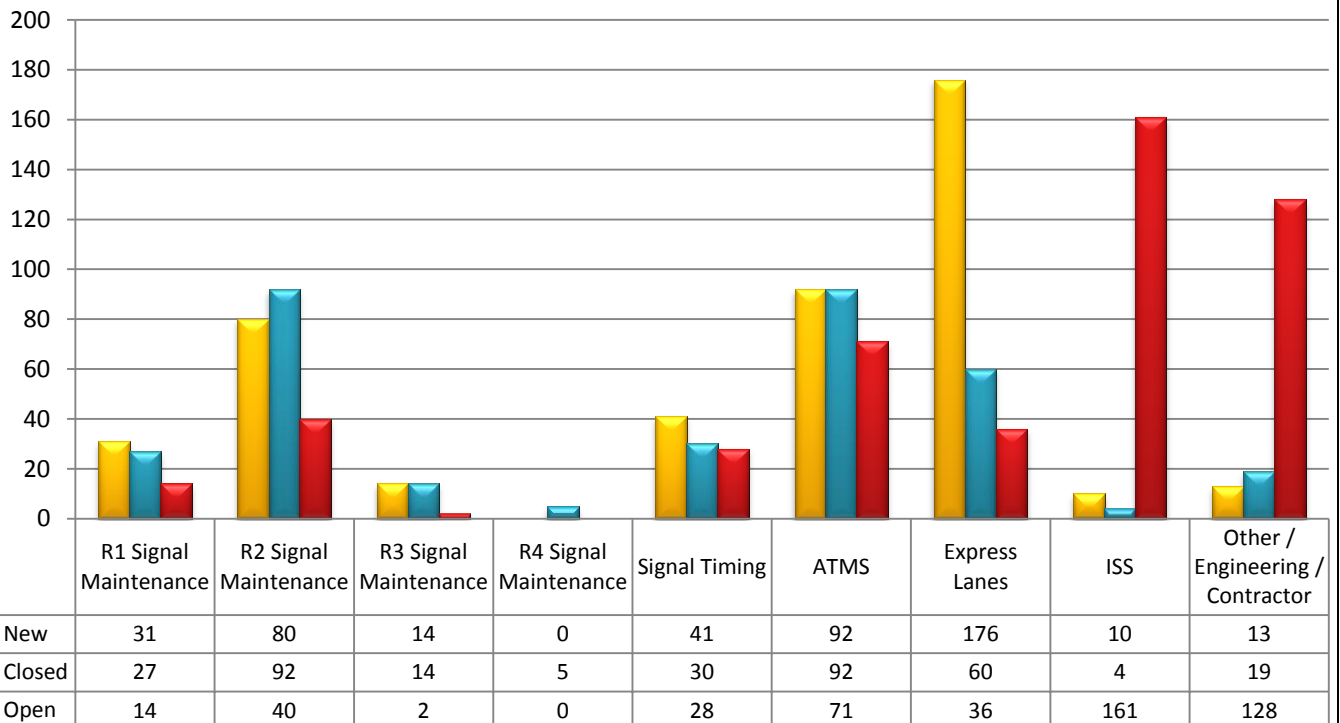


Number of New Work Orders



Work Order Statistics by Group - May 2015

Total New = 457, Closed = 343, Open = 480



CONTROL ROOM

Control room operators Scott Fugate, Tyler Rasband, and Joseph Burns received Silver Barrel awards for their quick response and actions during a structure fire that threatened life and serious injury, property damage, and road closure. The awards were presented May 1st by Carlos Braceras and Shane Marshall.

TOC operators managed 812 incidents, handled 1474 phone calls along with their daily responsibilities of posting VMS messaging, and registering work orders for malfunctioning ATMS equipment, which helps keep the ATMS system in world class condition.

The Traffic Operations Center Liaison (TOCL) was activated 12 times for high travel impact crashes, significant weather events and to support major construction road closures.

Frequent rain storms throughout the month damaged several routes throughout the state which needed to be closed for repair and maintenance. Flooding and standing water were a constant concern for the control room. A thunderstorm cell at the Point of the Mountain quickly overloaded the storm drainage in the Point Project, flooding the travel lanes. I-15 traffic backed up to seven miles for several hours. The operators and TOCL coordinated with the Point Project to inform drivers what to expect, and suggested alternate routes be taken.

The control room provided support for the Vigor Utah Half Marathon, St. George Iron Man Competition, Ogden Marathon, several high school graduations held at Utah Valley University, supported the "Fatality Friday" and "Message Monday" VMS messaging during the "100 Deadliest Days" for the Zero Fatalities Initiative, and supported the UHP closing Arches National Park entrances over the Memorial Day Weekend. This action was taken because of the risk for high speed crashes when Arches National Park traffic waiting to enter the park backed onto SR-191.

TRAVELER INFORMATION

The Salt Lake Chamber of Commerce Leadership was led on a tour of the TOC. UDOT was represented at the multi-state Traffic Management Pooled Fund study.

UDOT 's Lane Closure Initiative was presented at the ITS America about and the Citizen Reporter program was presented .



WEATHER INFORMATION

There were 270 overall weather information interactions, 120 outgoing weather alerts, 13 National Weather Service collaborations, and three road weather alerts. The number of weather interactions and outgoing weather alerts were the highest number for any May on record.

Climatology

May was a very wet month for the state of Utah with the entire state receiving above normal precipitation and parts of the west desert and eastern Utah receiving more than 400% normal precipitation. Salt Lake International Airport received 4.19" of rain, which was about 250% normal, and received the most precipitation in one month since May 2011.

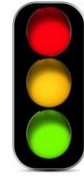
Weather Operations

There were three TOC weather operations tours in May by members of VicRoads of Victoria, Australia, civil engineering students from the University of Utah, and UDOT's civil rights group. RWIS preventative maintenance began this month and will continue into June. Weather information group members met with three Region 4 maintenance sheds and attended the Public Safety Summit meeting in Layton.





TRAFFIC SIGNAL OPERATIONS



Regions 1: 60 percent of the signals in Region 1 have been converted to the new Central Control System.

Region 2: A new algorithm was installed on Foothill Blvd. that uses historical data to automatically optimize signal progression with the goal to increase the percentage of vehicles arriving during the green cycle. A manual signal coordination project in 2013 increased off peak vehicle green cycle arrival to 81%. The automated algorithm increased the off peak vehicles green cycle arrival to nearly the 2013 levels. This new process will allow more frequent signal timing optimization, keeping the traffic signal system operating at peak efficiency.

Peer to peer communication logic was installed at the 700 North and I-215 interchange on two signals, which keeps both signals synced with each other 24/7, improving traffic flow and safety.

Region 3: The intersection at Pacific Drive and State Street in American Fork was rebuilt, adding dual left turn lanes on the southbound leg, and flashing yellow arrows on the remaining legs. Pedestrian crossings were added at the Main Street and Arrowhead Trail intersection. Traffic congestion was minimized at the several high school graduations held in the region at the end of May and beginning of June.

Region 4: All of the signals in Washington City, St. George, Santa Clara and Cedar City have been converted to the new Central Control System, and the controller firmware was updated for all non-system intersections throughout the Region.



TRAFFIC OPERATIONS AND REPORTING

The traffic operations teams supported and participated in the following efforts: Redwood Road, California Ave to 2100 South signal timing support; Decoster Leadership Training; Congestion Reporting; I-15 Point MOT analysis; I-80/State EIS; Managed Motorways workshop; I-80/Jeremy Ranch interchange analysis; Bluff St/Sunset Blvd intersection analysis; SR-201/I-215 interchange analysis; Redwood Rd/5400 S Traffic Impact Study ; PeMS procurement; Wasatch Front Central Corridor Study; Moab Main Street Signal/Pedestrian study; 5600 West railroad analysis; Lehi Technology Corridor Study; East/West mobility Study; and the SW County transit study.



ITS ASSET MANAGEMENT

ITS Standards and Specifications:

Work continued on the HNTB Standards assignments and with Narwhal Group who is working on the NEC and NESC review.

Procurement:

The ATMS fiber optic cable maintenance, repair and, install contracts was advertised and bids were awarded and contract preparation is under way. Work continued on the IP-CCTV development. VITEC sent the IP-Decoder and Mike Xiras began testing it in the lab. Chuck Felice enlisted John Amidon from Narwhal Group to work on the TranSuite software. TransSuite has a pre-programmed module that is supposed to work with COHU IP CCTV and is not currently in use by the TOC. It is hoped that either of these solutions will allow the video streaming from the various IP encoders already deployed in the field to be displayed on the video wall.

Special Projects

Concept report for VMS on I 215 Eastbound near 2300 East and VMS on I-15 Northbound, North of Bangerter was completed. Gathered information on cost for structures and drilled foundations, studied the UDOT Project Managers manual.

ATMS MAINTENANCE

Teaming

ATMS lab technicians continued cross training with and supported the ETC team. One member of the lab team was assigned to work with the ETC team until the I-15 South Davis Project is complete. The Lab and Field teams worked together to troubleshoot and repair five CCTV sites in Little Cottonwood Canyon that were damaged by a power spike. The field team and UDOT Meteorology group reestablished communication at two RWIS, along with one in Little Cottonwood Canyon and completed a solar power upgrade at the I-15 and SR-126 RWIS.

Field Team

The team completed the LOFT at five CCTV sites in the Riverton area, and completed 70 work orders.

With the assistance of several people in the TMD the crew hosted a special barbecue for Christopher Smith who is being deployed to Kuwait with his US Army Reserve unit. The Team would like to thank everyone who donated money, food, and time to make this a memorable event for Chris and his wife Tonya. The banner, signed by everyone in the TOC, will be framed and hung over the family fireplace until he returns. We would like to extend special thanks to Lisa Miller for making the banner and working so hard with us to make this event happen.



ATMS MAINTENANCE

Lab Team

The Team tested and/or repaired 13 ATMS devices. Released two traffic signal cabinets to Hidden Peak for Minuteman Drive on 14600 South and SCI for US-89 on State Street. Picked up and burned in two traffic signal cabinets for the following locations: 3300 South @ 2000 East and 7800 South @ 700 East. Tested and released four traffic signal cabinets, set up and tested two IP CCTV cameras from different manufacturers and set them up for Transcoding Video trials for possible inclusion in the upcoming CCTV procurement process. The Electronics Lab invited Rob Clayton, John Haigwood and Mark Parry to participate in a Non Intrusive Detector installation at 6200 South I-215 East. Assistance was provided to Kent Barnes of Salt Lake County by repairing their Redline radio and in conjunction with the ATMS field crew, restored communications to 5600 West on 6200 South. Assisted the motor pool by taking the fleet-owned Ford Escape in for safety recall service and to have the front brakes replaced at the Complex. The lab team closed 14 work orders.



Express Lanes Team

The team closed 60 system generated work orders, hard reset two VTMS, and rebooted seven clusters. Three clusters were repaired and configured. Also reset one laser, a reader, and completed 15 cabinet PM inspections. The weekly drive through inspections were completed. *The team has also been working with the South Davis County's I-15 project contractors in preparation for the onsite first installation test, programming and inspecting ETC devices for the project.*



PROJECTS

Region One

- ❖ **Statewide Signal Interconnect:** This has been changed to a larger scope and will be called Statewide Signal Interconnect. PineTop Engineering has been working on the design for this to advertise.
- ❖ **Antelope and US-89:** This project is under construction and nearly complete.
- ❖ **200 N. 300 W. Kaysville:** This is under construction.
- ❖ **I-15; SR-30 to the Idaho State line:** This project has been designed by PineTop Engineering and is ready to advertise. This project needs major funding for ATMS. This project may be part of a partnership with a telecom.
- ❖ **Layton Interchange:** This project is in design.
- ❖ **200 N. and Flint St.:** This project is under construction.
- ❖ **Logan HUB relocation:** Project is under construction. Nearing completion.
- ❖ **US-89; SR-193 to Cornia Drive:** This project is under construction.
- ❖ **US-89; Antelope Drive Extension:** This project is under construction.
- ❖ **Logan CCTV's:** This project is under construction.
- ❖ **SR-126 and 1300 N.:** This project is in design.



Region Two

- ❖ **Salt Lake Valley Signal Interconnect:** Several traffic signals are getting added to the system and can now communicate to the Central Traffic Signal System. Most of the 'low hanging fruit' has been picked so now we are targeting the more difficult connections. Along with connecting old signals, UDOT Traffic & Safety has been upgrading several traffic signals and we are updating the fiber infrastructure in the cabinet and adding new traffic cameras improving the ability for signal technicians to troubleshoot operations by seeing more intersections.



.PROJECTS

Region Three

- ❖ **SR-92 CCTV/Hybrid VMS (12641):** Met with software development group to establish contract scope. Evaluated solar load needs and ordered applicable equipment.
- ❖ **SR-145 Pioneer Crossing Extension to SR-73 (11349):** Addressed final punch list items.
- ❖ **Saratoga Springs; Pony Express; SR-68 to 800 West (8581):** Saratoga Springs needs project completed before 2015 school year begins. Announced that they will be constructing the 800 West signal before then.
- ❖ **Region 3 traffic signal connections (12774):** Utopia completed all the outstanding field work needed for fiber connections. Hired Integrator for Payson and Spanish Fork integration.
- ❖ **Roosevelt; SR-121 @ State Street Signal (12078):** STRATA connection schedule under way for all devices in Uintah Basin.
- ❖ **Park City Area Traveler Information Infrastructure signing (12812):** Developing cooperative agreement regarding funding participation, sign design, aesthetic concerns, operational guidelines.
- ❖ **US-40 CCTV/Signal connections (12805):** STRATA connection schedule under way for all devices in Uintah Basin.
- ❖ **Vernal; US-40 @ 2100 West Signal/CCTV (13018):** On hold due to ROW issues.
- ❖ **Roosevelt; US-40 @ 2000 West Signal/CCTV (12980):** On hold due to ROW issues.
- ❖ **Spanish Fork; SR-156 @ 800 North Signal/CCTV (13098):** Project compete.
- ❖ **Orem; 800 North Extension (Vineyard) (10810):** Contractor to relocate ATMS junction boxes.
- ❖ **Provo Canyon RWIS/VMS (11410):** Held Project comment resolution meeting.
- ❖ **US-189; State Park to Rock Cut passing Lanes (11415):** Held Plan in Hand meeting.
- ❖ **Fiber connection to three Maintenance Sheds (13681):** Held project kickoff meeting.

Region Four

- ❖ **St. George:** We will be working on getting a scope together to get some CCTV's and various signal interconnections. PIN has been set up.
- ❖ **Pine Creek Truck Climbing Lane:** This project is under construction.
- ❖ **Fiber upgrade for US-6, Helper and Price Signal Integration:** We are still waiting for the private telecom to get their portion of work completed.
- ❖ **Beaver Truck Climbing Lane:** Project is under construction.
- ❖ **I-15; North Beaver to Manderfield:** Solar deficiencies are being mitigated with the contractor.
- ❖ **Cedar City Fiber:** Project is in design.
- ❖ **Price, Helper fiber and Interconnect:** This project has been completed. We are still waiting for the telecom to complete their portion of work.
- ❖ **Beaver Shed and Fiber HUB:** This project is in design.

HEROS AT THE TOC SILVER BARREL AWARD

Carlos Braceras and Shane Marshall were here at the Traffic Operations Center on May 1 to give Scott Fugate, Tyler Rasband and Joe Burns a Silver Barrel award. Scott, Tyler and Joe went above and beyond by alerting the fire department of a grass fire before it got out of hand, likely saving thousands of dollars of property damage.

Congratulations to Scott Fugate, Tyler Rasband and Joe Burns for thinking fast and acting quickly to take control of a possibly devastating situation.

The following Silver Barrel nomination was written by Corey Coulam, UDOT Traffic Operations Center Control Room Manager.

On the night of March 22 around 8:30, the control room received a message from Salt Lake County dispatch describing a report from a Utah Highway Patrol Trooper of a loud popping noise at 2100 South and 900 West. Operators, Scott Fugate, Tyler Rasband and Joseph Burns, took action to use a traffic camera to try to locate what the trooper had reported. They quickly identified the flames of a fire started by transients that threatened a structure.



The operators provided the live stream video feed to Salt Lake County UHP dispatch and gave them a detailed description of the incident and location. Dispatch then contacted the Fire Department with precise information and visual confirmation readily available. Because of these quick reactions, the Fire Department was able to respond quickly to this incident. The Fire Department is noted in a news article saying that these quick reactions and the availability of a camera feed prevented this from becoming a larger fire with the potential for serious infrastructure damage.

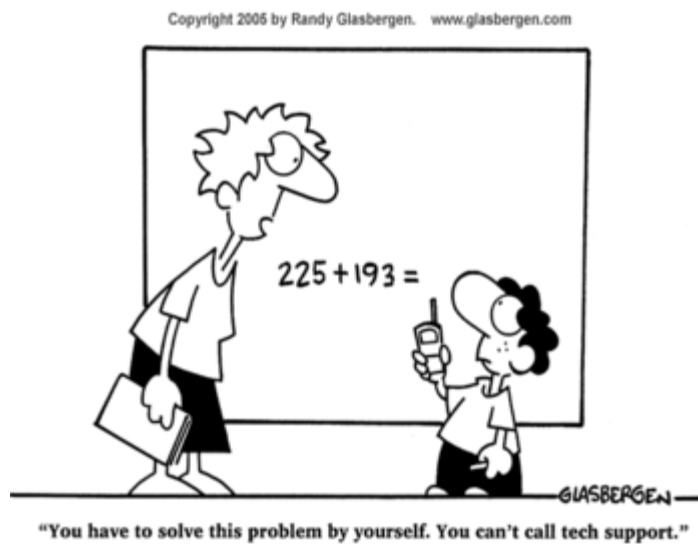
This was reported without exact confirmation and, at the time of the incident, there were no traffic impacts whatsoever however these operators relied on their experience and skills to help emergency responders. Scott Fugate, the shift supervisor and his familiarity (from almost 8 years of working in the control room) with UHP, dispatch, and situational awareness provided him the ability to realize that this had the potential to become a large scale incident. In addition, operator skills with control room software and camera use played a large role in helping them to locate this incident on a surface street location where camera coverage is poor. What makes this more impressive is the fact that the call came at night, when the difficulty of locating incidents by camera is significantly increased.



TMD Operation Highlights

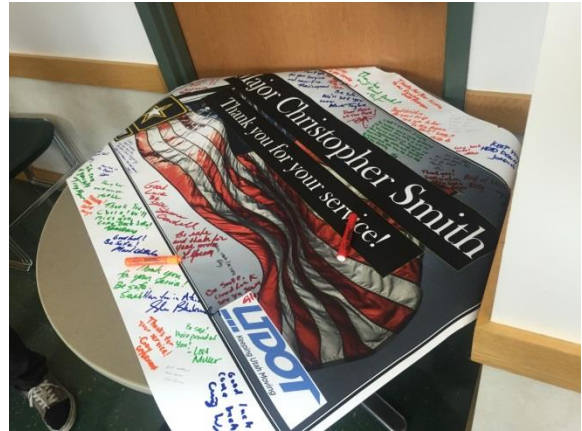


Mark Taylor (right) and co-biker Danny Fuhr (left) for UHP on May 28th for the Southern Utah Road Respect Tour to Panquitch Lake.



TMD Operation Highlights

The TOC hosted a luncheon for our brave soldier Major Christopher Smith as he gets ready to deploy a logistical support mission to Kuwait. We enjoyed light lunch in the TOC break room and let Chris know that we appreciate the sacrifices he is making while we hold down the fort here at UDOT. Chris is part of the United States Army's 4th Expeditionary Sustainment Command. Thanks for helping to celebrate Chris and his military service. Thank you Chris for your service and sacrifices for our freedom and our country.



Acronyms

CCTV	Closed Circuit Television	DPS	Department of Public Safety
EIS	Emergency Information System	HAR	Highway Advisory Radio
I2TMS	Integrated Interagency Traffic Management System		
ITS	Intelligent Transportation System	LFOT	Local Field Operations Test
MIC	Manager in Charge	MOT	Maintenance of Traffic
RWIS	Road-Weather Information System	TAC	Technical Advisory Committee
TMD	Traffic Management Division	TMS	Traffic Monitoring Station
TOC	Traffic Operations Center	VMS	Variable Message Sign



Happy
Mother's
Day